WHAT IS CLAIMED IS:

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1. A pump for transporting bodily fluids comprising:

an outer pump housing formed with an interior surface having concentric inner and outer passageways;

a rotor positioned within the pump housing and rotatedly fixed relative to the pump housing; and

an interior compartment formed with inner walls that surrounds at least a portion of the rotor defining an inner region in communication with the inner pump housing passageway and further defining an outer region with the interior surface of the pump housing in communication with the outer pump housing passageway.

2. The pump for transporting bodily fluids as recited in claim 1 wherein the interior compartment and the pump housing are substantially cylindrical.

3. The pump for transporting bodily fluids as recited in claim 1 wherein the pump is a centrifugal pump.

4. The pump for transporting bodily fluids as recited in claim 1 wherein the interior compartment walls substantially surround the rotor.

5. The pump for transporting bodily fluids as recited in claim 4 wherein the pump is an axial pump.

6. A hubless reverse flow rotor comprising:

a central portion formed with an exterior surface and a passageway for the directional flow of fluid relative to the rotor; and

a base portion having at least one supporting member for positioning the central portion in a spaced apart relation to the base portion to permit the

reverse flow of fluid relative to the rotor along the exterior surface of the central portion.

7. The hubless reverse flow rotor as recited in claim 6 further including at least one rotor blade formed on the exterior surface of the central portion.

8. The hubless reverse flow rotor as recited in claim 7 wherein the at least one supporting member is a rotor blade.

9. The hubless reverse flow rotor as recited in claim 6 wherein the rotor is a shear pump rotor.

10. The hubless reverse flow rotor as recited in claim 7 wherein the exterior surface of the central portion and the base portion is formed with a substantially truncated conical configuration.

11. A reverse flow pump and coaxial lumen system comprising:

an outer pump housing formed with an interior surface and concentric inner and outer passageways;

a hubless rotor rotatedly fixed relative to the pump housing formed with an open central passageway in communication with the inner pump housing passageway for reversing the directional flow of fluid within the region defined by the interior surface of the pump housing and the rotor that is in communication with the outer pump housing passageway.

a pair of concentric conduits formed of different lengths each having a proximal end and a distal end for the directionally opposed transport of fluid within a closed environment wherein the proximal ends of the concentric conduits are substantially aligned with the inner and outer pump housing passageways to provide continuous flow between the conduits and reversal of fluid flow direction.

12. The system as recited in claim 11 wherein the inner conduit is an inner cannula and the outer conduit is a graft formed within a living body.

13. The system as recited in claim 12 wherein the hubless rotor is driven by a driving unit positioned within the graft.

14. The system as recited in claim 12 wherein the hubless rotor is driven by a driving unit positioned external of the graft.

15. The system as recited in claim 14 further including an extension body in communication with the graft and positioned within a percutaneous opening in the body.

16. The system as recited in claim 15 wherein the driving unit is positioned within the extension body and external to the living body.

17. The system as recited in claim 16 wherein the system further includes a positioning rod and at least one silicon plug for placement of the driving unit within the extension body.

18. The system as recited in claim 11 further comprising at least one inflatable balloon disposed adjacent the inner cannula.

19. The system as recited in claim 18 wherein the balloon is in communication with a transport conduit formed along the inner cannula for inflating the stabilization balloon.

20. The system as recited in claim 18 wherein the inflatable balloon is formed with perforations to permit transmission of fluid through the balloon membrane to the external area surrounding the perforations of the balloon.

21. The system as recited in claim 20 further including a second inflatable balloon formed spaced apart and more proximate relative to the first inflatable balloon.

22. The system as recited in claim 12 wherein the system further includes at least one inflatable occluding balloon adjoining the inner cannula.

23. The system as recited in claim 12 wherein the inner cannula is formed with an orifice.

24. The system as recited in claim 23 wherein the orifice is in communication with an external pressure source.

25. A heart stabilization system for providing a stable surgical site comprising:

a cannula formed with a distal opening and a proximal opening for the flow of blood between different regions of the heart; and

an inflatable stabilization balloon formed adjacent the inner cannula for supporting a cardiac wall to provide a more stable surgical site when inflated with fluid.

26. The heart stabilization system as recited in claim 25 further including an intravascular pump in communication with the cannula to provide circulation of blood between the distal and proximal openings of the cannula.

27. The heart stabilization system as recited in claim 25 further including a reverse flow pump with a pair of concentric passageways and an outer conduit positioned in a blood vessel wall wherein the relatively inner pump passageway is in communication with the cannula and the relatively outer pump passageway is in communication with the outer conduit for transporting blood between different regions of the heart.

28. An organ stabilization device for operative sites comprising:

a flexible guiding element for providing access to interior regions of a body organ defined by collapsible walls; and

stabilizing means attached to the guiding element for providing support to the organ wall from the interior region of the organ that substantially immobilizes the operative site of the organ for performance of operative procedures.

29. A method of stabilizing an operative site on an organ comprising the steps of:

selecting a cannula formed with an inflatable stabilization balloon for stabilizing an operative site on an unsupported organ wall;

positioning the cannula within a living body so that the stabilization balloon is positioned in the underlying region proximate to the operative site;

inflating the stabilization balloon to provide a more stable operative site by internally supporting the organ wall with the inflated stabilization balloon so that operative procedures may be carried out on the organ wall; and

deflating the stabilization balloon for removal of the stabilization balloon and cannula from the living body.

30. A method of stabilizing a cardiac wall during heart surgery comprising the following steps of:

selecting a cannula formed with a distal opening and a proximal opening for the flow of blood between different regions of the heart and an inflatable stabilization balloon formed adjacent the inner cannula for supporting a cardiac wall that provides a more stable surgical site when inflated;

selecting a heart pump for attachment to the cannula to direct the flow of blood between the distal and proximal openings of the cannula;

positioning the cannula within a heart chamber so that the stabilization balloon is positioned in the underlying region of the heart wall proximate to the surgical site;

activating the heart pump to direct the flow of blood between different regions of the heart;

inflating the stabilization balloon to provide a more stable surgical site by internally supporting the heart wall with the inflated stabilization balloon so that surgical procedures may be carried out on the heart wall; and

deflating the stabilization balloon for removal of the stabilization balloon and cannula from the heart region.

31. A coaxial lumen assembly for a fluid pump comprising:

a pair of conduits having proximal ends for communication with the inlet and outlet passageways of a fluid pump and spaced apart distal ends wherein at least a portion of the conduits form a shared coaxial region proximate to the distal end of the outer conduit for the reverse flow of fluid.

32. The coaxial lumen assembly as recited in claim 31 wherein the conduits are a pair of concentric conduits having substantially aligned proximal ends and relatively spaced apart distal ends.

33. The coaxial lumen assembly as recited in claim 32 wherein the proximal ends of the concentric conduits are configured for connection with a reverse flow pump.

34. The coaxial lumen assembly as recited in claim 31 wherein the proximal ends of the concentric conduits are configured for connection with a centrifugal pump.

35. The coaxial lumen system as recited in claim 31 wherein the proximal ends of the concentric conduits are configured for connection with an axial pump.

36. The coaxial lumen system as recited in claim 31 wherein the proximal ends of the concentric conduits are configured for connection with a roller pump.

37. The coaxial lumen system as recited in claim 31 wherein the proximal ends of the concentric conduits are configured for connection with a mixed flow pump.

38. A dual lumen fluid transport device comprising:

a pair of relatively inner and outer conduits having spaced apart distal ends and proximal ends for connection to fluid pump passageways wherein at least a portion of the inner conduit passes through a distal portion of the outer conduit.

39. The dual lumen fluid transport device as recited in claim 38 wherein the relatively inner and outer conduits are concentric.

40. The dual lumen fluid transport device as recited in claim 38 wherein the inner and an outer conduits are formed of different lengths.

41. The dual lumen fluid transport device as recited in claim 38 wherein the inner and outer conduit forms a unitary body.

42. A reverse flow dual lumen system for a fluid pump comprising:

an inner conduit for the directional flow of fluid having a proximal opening for connection to a first fluid pump passageway; and

an outer conduit for the reverse directional flow of fluid having a distal opening spaced apart from the distal opening of the inner conduit and a proximal opening for connection to a second fluid pump passageway wherein at least a portion of the inner conduit is passed through a sealed opening formed in the outer conduit extending away from the distal opening of the outer conduit.

43. The system as recited in claim 42 wherein the sealed opening is formed in a Y-connector.

44. The system as recited in claim 43 wherein the sealed opening includes a hemostatic valve.

45. The system as recited in claim 42 wherein a hemostatic seal is formed at the sealed opening between the inner conduit and the outer conduit.

46. The system as recited in claim 42 wherein the inner conduit is a cannula and the outer conduit is a graft.